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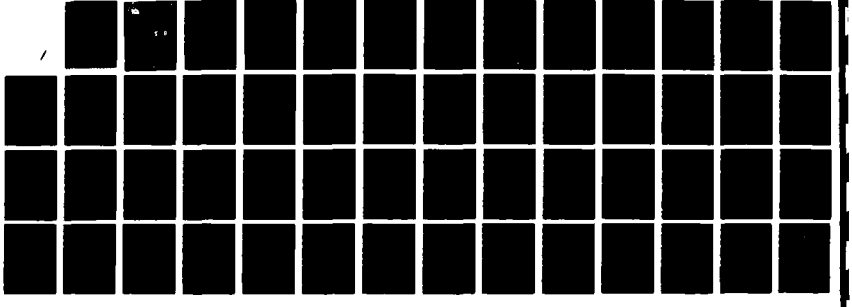

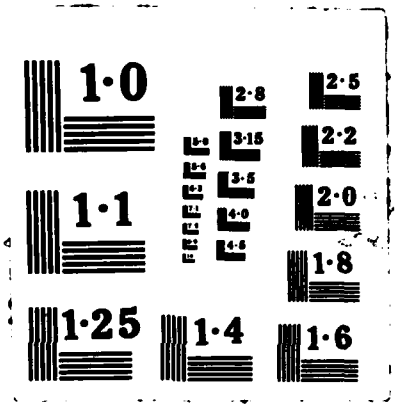
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UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT

SPACE OPERATIONS UTILIZATION FIELD

AFSC 20XX

AFPT 90-20X-426

JULY 1987

OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
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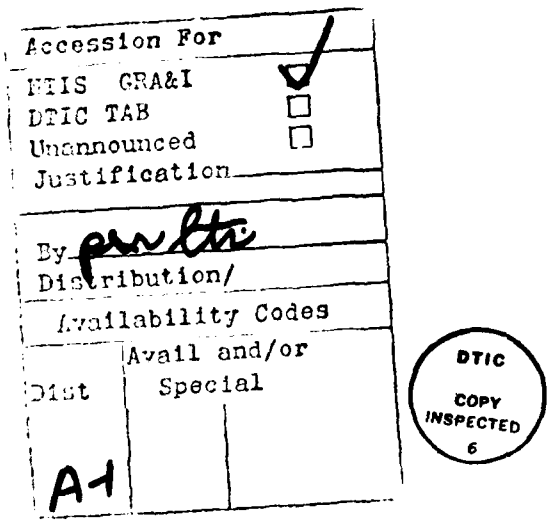

TABLE OF CONTENTS

PREFACE

This report presents the results of an occupational survey of the Space Operations career ladder (AFS 20XX). The survey was requested by HQ AFSPACECOM/DCS Operations to validate career field organization and to update Undergraduate Space Training (UST). Authority for conducting occupational surveys is contained in AFR 35-2. Computer products upon which this report is based are available for use by operations and training officials.

The survey instrument for this project was developed by Captain Wes Roberts, Lieutenant Dave Hardy, and Mr Joe Bergmann. Mr Wayne Fruge provided computer support for this project, and administrative support was provided by Mrs Linda Sutton. Lieutenant Fred Ward analyzed the survey data and wrote the report. This report was reviewed and approved by Dr Linda S. Aslett, Chief, Management Applications Branch, USAF Occupational Measurement Center, Randolph AFB, Texas 78150.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the USAF Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB, Texas 78150-5000 (AUTOVON 487-5811).

RONALD C. BAKER, Colonel, USAF
Commander
USAF Occupational Measurement Center

JOSEPH S. TARTELL, GM-14
Chief, Occupational Analysis Division
USAF Occupational Measurement Center

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SUMMARY OF RESULTS

1. PURPOSES OF SURVEY: The purposes of this study were to provide information for an update of the Undergraduate Space Training (UST) course training standards (CTS), to evaluate the need for educational and experience prerequisites, and to provide information on where to provide hands-on training.

2. SURVEY COVERAGE: Survey results were based on the responses of 756 Space Operations personnel.

3. SPECIALTY JOBS: Fourteen major jobs were identified in this study. Two were independent jobs (Manned Space Flight Officers and Trainers), and the remainder fell into either the Staff Personnel cluster or the Crew Activities cluster.

4. CAREER LADDER PROGRESSION: Although administration, management, and command tasks predominated for all jobs, junior officers typically performed the bulk of the technical tasks. Captains and majors performed administration, management, and command tasks as well as technical tasks, and lieutenant colonels and colonels performed primarily the administration, management, and command jobs.

5. AFR 36-1 SPECIALTY DESCRIPTIONS: Generally, the data support the AFR 36-1 job description. The specialty descriptions capture the technical aspects of DAFSC very well. Mandatory requirements for color vision for all 20XX officers (except 209X), and technical undergraduate degrees for DAFSC 204X and 205X officers were not supported by the data.

6. TRAINING ANALYSIS: A match of USAFOMC Job Inventory tasks with the UST Plan of Instruction (POI) could not be accomplished because the Job Inventory is based on task performance and the POI is knowledge based. A match will be done with the 1013th Combat Crew Training Squadron POI and will be made available to interested users. Training emphasis (TE) data is not available due to disagreement among respondents on what should be trained for new 20XX officers.

7. IMPLICATIONS: Once UST converts from a knowledge-based course to a more task-performance course, a POI match should be conducted to validate training. Junior officers are performing the more technical tasks, although over one-third of their time is spent performing administration, management, and command functions. TE raters were not able to agree on specific tasks which should be trained; however, some areas were given more emphasis for training than others. Color vision and undergraduate technical degrees do not appear necessary for any of the DAFSC groups.

OCCUPATIONAL SURVEY REPORT
SPACE OPERATIONS
(AFS 20XX)

INTRODUCTION

This is a report of an occupational survey of personnel in the Space Operations utilization field completed by the Occupational Analysis Division, USAF Occupational Measurement Center. The last occupational survey of this utilization field was published in February 1981. The present survey was requested by HQ AFSPACECOM/DCS Operations to validate career field organization and update UST.

Background

AFS 2016 - In 1966, AFS 2016 became the Space Systems Staff Officer, and from 1981 to present is the Space Operations Staff Officer specialty.

AFS 2025 - From 1966 to 1981, AFS 2025 consisted of two suffixes: the 2025A Space Analyst (Orbital Analyst) and the 2025B Space Systems Analyst (Space Object Identification Analyst). Both suffixes came from AFS 1744, Weapons Controller. In 1981, AFS 2025A and 2025B personnel became AFS 2025, Space Operations Analysts, or AFS 2055, Satellite Operations Officers.

AFS 2035 - In 1966, the 2035A and 2035B shreds were established from AFS 1744, Weapons Controller. The 2035A worked with space sensor systems and the 2035B worked with space weapons systems. In 1978, these two specialties became Space Operations Officers; the 2035A personnel worked with space/warning sensor and control systems and the 2035B worked with space control systems. Nineteen eighty-one marked a change for personnel in AFS 2035; they became Space Operations Officers. The shredouts are presently defined as follows:

2035A - Ground Based Surveillance Systems
2035B - Space Systems Control
2035C - Space Command and Control Systems
2035D - Space Weapons Systems

AFS 2045 - The 2045 specialty was established in 1981 as Manned Space Flight Operations Officer. The shredouts broke-out as follow:

2045A - Flight Director
2045B - Flight Controller
2045C - Flight Planner
2045D - Flight Support

[redacted]

In 1985, the 4 shreds were deleted and the specialty became AFS 2045.

AFS 2055 - The satellite Operations Officer specialty was established in 1981.

AFS 2066 - AFS 2066 was established in 1981 and has two shredouts:

2066A - Astronaut, Pilot
2066B - Astronaut, Mission Specialist

AFS 2096 - AFS 2096 became Space Operations Director in 1981.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-20X-426, dated July 1986. The job inventory consisted of two sections: (1) a background information section where survey participants gave general information about themselves and their jobs, and (2) a duty-task list section where respondents indicated the tasks they currently perform.

The task list consisted of 928 tasks grouped under 15 duty titles. The list was developed through interviews with over 100 Space Operations personnel at 18 locations worldwide. The tasks were validated at a workshop attended by 20XX officers representing the Air Staff, Air Force Military Personnel Center (AFMPC), and the MAJCOMs.

Survey Administration

Job inventory booklets were administered through Consolidated Base Personnel Offices (CBPO) at locations worldwide. The CBPOs were responsible for administering the inventory to 20XX personnel and returning the booklets to USAFOMC. The officers who participated in the survey were selected from a computer-generated mailing list obtained from the Air Force Human Resources Laboratory (AFHRL).

Each individual who completed a job inventory booklet first answered the background questions. The respondent then checked those tasks listed in the booklet which he or she performed, annotated any additional tasks performed, and rated each task checked on a 9-point scale showing relative time spent on the task as compared to all other tasks checked. The scale used was as follows:

Rating	Time Spent
1	Very small amount
2	Much below average
3	Below average
4	Slightly below average
5	About average
6	Slightly above average
7	Above average
8	Much above average
9	Very large amount

To determine relative time spent for each task checked by a respondent, all of an incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task.

Survey Population

To participate in the occupational survey of Space Operations personnel, officers had to be assigned to their present duty position for at least 60 days; not programmed for PCS, retirement, or discharge for at least 90 days; and possess one of the 20XX duty AFSCs. From a total of 1,588 officers assigned to the Space Operations utilization field, 1,271 were eligible to respond to the survey.

Tables 1 and 2 compare the characteristics of the survey sample with the population characteristics of the utilization field. The survey sample is representative of the population across both paygrades and major commands. Thus, valid inferences can be drawn from the survey data.

Data Processing and Analysis

Inventory data returned from the field were entered into the Air Force Human Resources Laboratory computer at Brooks AFB. An automated job clustering program was used to organize jobs into similar types of work. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Programs (CODAP) utilized for job analysis. Each individual job description in the sample was compared to every other job description in terms of the relative amount of time spent on each task in the job inventory. The result was a grouping of incumbents based on the performance of similar tasks and spending similar amounts of time on those tasks. Computer-generated job descriptions of each group were used to examine the structure of the field being studied in terms of what tasks people were actually performing.

TABLE 1

COMMAND REPRESENTATION OF SURVEY RESPONDENTS

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AFSPACECOM	48	42
AFSC	29	33
USSPACECOM	4	13
ATC	3	5
OTHER	16	7

TABLE 2

PAYGRADE REPRESENTATION OF SURVEY RESPONDENTS

RANK	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
2D LT	26	18
1ST LT	18	18
CAPT	35	39
MAJ	12	15
LTC	7	8
COL	2	1

Task Factor Administration

Training Emphasis (TE). Individuals completing TE booklets were asked to rate tasks on a 10-point scale (from no training required to extremely heavy training required). Training emphasis is a rating of tasks indicating where emphasis should be placed in structured training for personnel entering the field. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method. For this study, TE raters were not able to agree on the amount of training needed for survey tasks (interrater reliability of .3). Therefore, the TE data available only indicates duty areas, where TE raters agree that some form of training is necessary.

JOB STRUCTURE ANALYSIS

The diversity of jobs within a functional area can greatly impact on the Air Force's classification of tasks and responsibilities into AFSCs. It is also an important consideration in developing formal training programs. As a result, the data analysis described in this report begins with a discussion of the types of jobs found within the 20XX utilization field.

To identify Space Operations jobs, the job descriptions from individual survey respondents were compared to one another. Survey participants who performed similar tasks and spent similar amounts of time on the tasks were clustered into groups. This clustering process revealed reportable groups of 14 jobs. A reportable group consisted of at least five members whose jobs had a reasonable degree of overlap. Figure 1 shows the distribution of all identifiable groups across the total survey sample. These groups accounted for 82 percent of the survey respondents.

Job Descriptions

This section of the narrative provides details about each of the jobs identified during the structure analysis. The information generally will be limited to a brief description of the individuals who make up the job and some of the tasks which illustrate the nature of the job. For larger jobs, the discussion will also include further details about some noteworthy subgroups.

I. STAFF PERSONNEL CLUSTER (GRP54, N=366). This group of 20XX officers made up 48 percent of the survey sample. The average number of tasks performed by members of this group is 74. They spent 52 percent of their time performing administrative, management, or command tasks and 14 percent of their time performing tasks related to systems development, integration, and acquisition. Specific tasks include:

FIGURE 1

20XX JOB STRUCTURE

I. STAFF PERSONNEL CLUSTER

- A. PLANS OFFICERS (GRP378, N=18)
- B. PERSONNEL AND MANPOWER OFFICERS (GRP337, N=6)
- C. SYSTEMS DEVELOPMENT, INTEGRATION, AND ACQUISITION OFFICERS (GRP190, N=52)
  1. CONTRACT MANAGEMENT OFFICERS
  2. ACQUISITION OFFICERS
  3. TEST AND EVALUATION OFFICERS
- D. STAFF SUPERVISORS (GRP344, N=75)
  1. DETACHMENT, SQUADRON, AND GROUP COMMANDERS
  2. DIRECTOR OF OPERATIONS
  3. CHIEF OF TRAINING
- E. STAN/EVAL OFFICERS (GRP444, N=10)
- F. TEST AND EVALUATION OFFICERS (GRP323, N=8)
- G. PROGRAM MANAGERS AND MONITORS (GRP245, N=6)

II. MANNED SPACE FLIGHT OFFICERS (GRP157, N=12)

- A. SPACE SHUTTLE FLIGHT DYNAMICS OFFICERS
- B. SPACE SHUTTLE SUPPORT OFFICERS

III. TRAINERS (GRP37, N=44)

- A. SIMULATOR TRAINING OFFICERS
- B. TECHNICAL TRAINING INSTRUCTORS
- C. TRAINING DEVELOPERS

IV. CREW ACTIVITIES CLUSTER

- A. CHIEF OF OPERATIONS (GRP163, N=80)
  1. OPERATIONS TRAINING CHIEFS AND CREW OPERATIONS DIRECTORS
  2. MISSILE WARNING OPERATIONS COMMANDERS
  3. TACTICAL OPERATIONS COMMANDERS
  4. SURVEILLANCE CREW COMMANDERS
  5. STAN/EVAL CHIEFS
- B. MISSILE WARNING CENTER COMMANDERS (GRP331, N=7)
- C. ORBITAL ANALYSIS OFFICERS (GRP129, N=19)
  1. ADMINISTRATIVE ORBITAL ANALYSTS
  2. ORBITAL ANALYSTS
- D. SATELLITE COMMAND AND CONTROL OFFICERS (GRP48, N=55)
  1. MISSION CONTROLLERS
  2. PLANNER ANALYSTS
  3. SATELLITE OPERATIONS OFFICERS
  4. MISSION PLANNERS

attend space systems-related conferences, meetings, and working groups
conduct informal briefings
draft or write point, position, or talking papers
review regulations or manuals
exchange technical data with contractors

A typical profile of a member of this group is a captain or major with 6 years of 20XX experience. Ninety percent have been in their present job less than 3 years, and most carry DAFSC 2016 or 2035. The two major commands to which most of these officers are assigned are AF Systems Command (AFSC) and AF Space Command (AFSPACECOM). Over 80 percent of the group need access to restricted information to perform their job, and most work at one of the following organizational levels: Detachment, Squadron, MAJCOM, Joint Service, DOD, or HQ USAF. Job satisfaction for these officers is very high. Finally, 14 percent of this group spent more than 4 years as 18XX officers prior to becoming Space Operations officers. Within this Staff Personnel cluster, seven distinctly different jobs were identified:

A. Plans Officers
B. Personnel and Manpower Officers
C. Systems Development, Integration, and Acquisition Officers
D. Staff Supervisors
E. Stan/Eval Officers
F. Test and Evaluation Officers
G. Program Managers and Monitors

The following is a more specific discussion of these jobs.

A. Plans Officers (GRP378, N=18). Ninety percent of this group are captains and majors. Most are members of AFSPACECOM and work in a headquarters job. Sixteen tasks comprise 50 percent of the time spent by these officers. These tasks are all administrative, management, or command tasks. Examples include:

attend space systems-related conferences, meetings, or working groups
draft or write staff studies or staff summaries
advise commanders or staff agency personnel on matters such as capabilities, procedures, or programs
conduct space systems-related conferences, meetings, or working groups
conduct formal briefings

B. Personnel and Manpower Officers (GRP337, N=6). An average of three people are supervised by members of this group. These officers are either captains or majors in AFSPACECOM or AFSC. Fifty percent of their time spent on the job is captured in 17 tasks. Example tasks are listed below.

evaluate unit manpower requirements
draft or write memoranda for the record
draft or write responses to action item
request justifications for manpower authorization adjustments
counsel personnel on career progression

C. Systems Development, Integration, and Acquisition Officers (GRP190, N=52). These incumbents perform an average of 72 tasks. Although many of these tasks are administrative in nature, several other tasks performed relate to contract management and monitoring. Example tasks include:

evaluate contractors' performance against SOW
review contractors' bids or proposals
review contractors' test plans or reports
draft or write point, position, or talking papers
conduct informal briefings

Seventy-three percent of these personnel have DAFSC 201X or 2035. Most are captains and majors within AFSPACECOM and AFSC, and nearly 1/2 have a Master's degree. Every officer in the group has been in his or her present job less than 4 years, and 20 have prior experience in AFSC 18XX. Within this group of 52 officers, 3 different groups can be clearly defined:

1. Contract Management Officers (GRP224, N=14). Eight of these 14 officers are in AFSC and are assigned to Los Angeles Air Force Station (LAAFS); the remaining 6 officers are at various AFSPACECOM locations. They are primarily lieutenants and captains, 50 percent of whom have a Master's degree. Eighty-five percent require access to restricted information in the performance of their job. Example tasks performed by these officers are:

review contractors' status reports
review contractors' performance against SOW
review contractors' expenditure reports
review, approve, or disapprove contractor documents requiring listing (CDRL)
evaluate contractors' performance, other than through use of checklist

2. Acquisition Officers (GRP455, N=10). In contrast to the previous group, the personnel in this job work with contractors and are involved in the acquisition process. Typical tasks performed include:

provide inputs to contractors' proposals for future space systems
provide inputs to contractors' proposals for expanding operational capabilities
provide inputs to SOW
review PMD or PMP
review documents pertaining to systems modifications, such as GDR, SON, or MENS

Eight officers performing this job are captains and two are majors. Sixty percent have Master's degrees and have DAFSC 2035. Eighty percent of the incumbents are in AFSPACECOM, and all 10 work at a headquarters. Time in present job for these personnel is less than 3 years.

3. Test and Evaluation Officers (GRP451, N=6). The data reflects that this job differs from the previous two. The job is comprised of 201X officers all of whom are employed at Kirtland AFB. Fifty percent of the group formerly held AFSC 18XX, and 67 percent of the officers have at least a Master's degree. Tasks that make this job different from the previous two include:

develop TPO
develop test approaches and concepts
revise TEMP
develop critical issues for operational test and evaluation (OT&E) testing
develop baseline correlation matrix (BCM)

D. Staff Supervisors (GRP344, N=75). Example tasks performed by the 75 respondents in this supervisory job are listed below:

attend space systems-related conferences, meetings, or working groups
approve or disapprove responses to action items
draft or write Officer Effectiveness Reports (OER)
review changes to regulations or manuals
advise commanders or staff agency personnel on matters, such as capabilities, procedures, or programs

These administrative, management, or command-related tasks captured 55 percent of this groups' time spent. Sixty-four percent of these supervisors have a 201X DAFSC, while 23 percent have a 209X DAFSC. In addition, nearly 19 percent carry a "commander" prefix (A). Sixty percent are AFSPACECOM supervisors, and 11 percent are USSPACECOM supervisors. The majority of these officers are majors and lieutenant colonels and have been in their present job 15 months. Finally, the average number of tasks performed by each member is 128.

Within this group of 75 officers, 3 distinct jobs are found: Detachment, Squadron, and Group Commanders; Directors of Operations; and Chiefs of Training.

1. Detachment, Squadron, and Group Commanders (GRP551, N=19). Of the 17 members of this job group, 3 are colonels, 10 are lieutenant colonels, and 6 are majors. Thirty-seven percent are assigned overseas, and 79 percent have at least a Master's degree. Sixty-four percent of the incumbents have the A-prefix. The average number of tasks performed by group members is 153. These commanders supervise, on the average, five people. Representative tasks performed are:

review OER
indorse APR
approve or disapprove responses to action items
counsel personnel on career progression
interpret policies or directives for subordinates

2. Director of Operations (GRP565, N=7). Lower rank, more supervision, and types of tasks performed make this job different from the Commander job. First, 71 percent of these officers are majors and 29 percent are captains. Second, they supervise an average of eight people, and third, they "draft" and "advise" rather then "review" and "indorse". Example tasks include:

draft or write OER
advise commanders or staff agency personnel on matters such as capabilities, procedures, or programs
draft or write nominations for awards or decorations
develop crew duty schedules or shift schedules
draft or write directives, such as OI or regulations

Overall, this group averages 134 tasks performed. All seven group members are AFSPACECOM assets, and all have less than 4 years in their present job.

3. Chiefs of Training (GRP429, N=6). Members of this job differ from other supervisory groups because these officers do not have approval authority and are not participants on the battle staff. Also, these incumbents perform more training tasks than personnel in the other jobs. Typical tasks performed include:

review evaluation reports to identify training weaknesses
assign suspense dates to action items
draft or write memoranda for record
counsel personnel on job performance, personal or military-related problems
evaluate student critiques

A profile of these personnel shows that 50 percent are captains, and the remainder are majors and lieutenant colonels. Eighty-three percent have Master's degrees, and 50 percent are entry level staff officers with DAFSC 2011. In addition, each member has been in his or her present job less than 2 years.

E. Stan/Eval Officers (GRP444, N=10). The tasks listed below are representative tasks performed by the Stan/Eval personnel.

conduct inspections of subordinate units, such as IG or stan/eval inspections
review formal inspection reports, such as IG, stan/eval, or staff assistance
develop inspection standards or criteria
develop inspection checklists
draft or write evaluation reports

On the average, this group performed 95 tasks, most of which are inspection related. Typically, these officers are captains, majors, or lieutenant colonels in AFSPACECOM with DAFSC 2016 or 2035. They work at the 1st Space Wing, 2nd Space Wing, or HQ AFSPACECOM.

F. Test and Evaluation Officers (GRP323, N=8). The eight officers in this job range from second lieutenant to lieutenant colonel with 1/2 of the group being captains. They perform an average of 110 tasks. Tasks performed include:

conduct systems tests
analyze data from tests of new or modified systems
develop test approaches and concepts
coordinate with personnel from external agencies on system evaluation procedures
evaluate new systems in operational environment

Sixty-three percent of the group members have at least a Master's degree, and 75 percent are either members of AFSC or AFSPACECOM. In addition, five of the eight incumbents work at AFOTEC or Onizuka Air Force Satellite Control Facility (AFSCF).

G. Program Managers and Monitors (GRP245, N=6). This group of Program Managers and Monitors is a special group. Every member works at LAAFS, is junior in rank, and works in Systems Command. All but one officer has been in his or her present job less than 1 year. Each incumbent needs access to restricted information to perform the job and, on the average, group members perform 89 tasks. Example tasks performed include:

review contractors' test plans or reports
review contractors' bids or proposals
coordinate with contractors to resolve systems or equipment malfunctions
exchange technical data with contractors
evaluate contractors' performance against SOW

INDEPENDENT JOBS

II. MANNED SPACE FLIGHT OFFICERS (GRP157, N=12). A truely unique group identified in this report is the Manned Space Flight Officers. Fifty percent of their time is spent performing 30 tasks. The top seven tasks performed are:

monitor air-to-ground voice transmission
generate flight data
monitor space shuttle attitude
plan for orbital anomalies
plan contingencies to SSV operations
monitor down-link television signal
conduct astronaut support.

A typical Manned Space Flight Officer is a captain or major in USSPACECOM or AFSPACECOM with DAFSC 2045. He or she works at the Johnson Space Center and has been in the present job over 3 years. Two types of Manned Space Flight Officers identified in this report are: Space Shuttle Flight Dynamics Officers and Space Shuttle Support Officers.

A. Space Shuttle Flight Dynamics Officers (GRP216, N=7). These officers perform tasks related to space shuttle flights. These tasks are more technical in nature than those performed by the next group (GRP221). Tasks that differ from GRP221 are:

monitor space shuttle attitude
analyze real time anomalies
calculate maneuvers for payload post deployment
analyze rendezvous phases
plan rendezvous procedures for orbiter

Officers in this group are members of AFSPACECOM.

B. Space Shuttle Support Officers (GRP221, N=5). Tasks performed by Space Shuttle Support Officers that are different from those performed by Flight Dynamics Officers include:

compile technical data for exchange with DOD or other governmental agencies, such as NMCC, AFSCF, or NASA
advise commanders or staff agency personnel on matters such as capabilities, procedures, or programs
plan activities for astronauts with regard to free flying satellites
draft or write nonoperational messages for electrical transmission
review regulations or manuals

Most of these Space Shuttle Support Officers are in USSPACECOM.

III. TRAINERS (GRP37, N=44). The second independent job identified is the Training Officer job. Members are junior in rank, with most being first lieutenants and captains. Forty-one percent have a "technical instructor" prefix (T), and 50 percent are members of Air Training Command (ATC). Ninety-two percent have been in their present job less than 3 years. These trainers perform an average of 51 tasks; for example:

draft or write lesson plans
draft or write tests
draft or write study guides, handouts, or workbooks
conduct formal training programs
design new training aids or equipment

Three groups of trainers identified in this report are Simulator Training Officers, Technical Training Instructors, and Training Developers.

A. Simulator Training Officers (GRP257, N=7). Respondents in this group performed an average of 65 tasks. Tasks that make these officers different from other training officers are:

conduct simulation training
operate simulator systems
operate training equipment
coordinate with contractor personnel to develop scenarios
conduct training on specialized or new equipment and procedures

These officers also differ because five members have DAFSC 2045 and five are in AFSPACECOM. Personnel supervise three people on the average and have been in the present job almost 2 1/2 years. Also, 50 percent work at the Johnson Space Center.

B. Technical Training Instructors (GRP440, N=8). In contrast to other trainers, officers in this job perform the following type of tasks:

conduct formal training programs
draft or write changes to technical training courses
evaluate student critiques
draft or write responses to critiques
substitute for other instructors

All of these instructors are ATC officers. All members have a T-prefix, and all are located at the 3430th Technical Training Group (TTG).

C. Training Developers (GRP514, N=6). Incumbents in this job are members of ATC and are assigned to the 3430 TTG. They have been in the present job less than 1 year and maintain one of two job titles: Courseware Developer or Curriculum Developer. Tasks that depict the job performed by this group include:

coordinate with local or base agency personnel to obtain training aids, space, or equipment
advise commanders or staff agency personnel on matters such as capabilities, procedures, or programs
allocate assigned funds
develop budgets or budget estimates
maintain test question bank

The entire job performed by these personnel is captured with 41 tasks. Also, 50 percent of their time is spent performing the following four tasks:

draft or write lesson plans
draft or write study guides, handouts, or workbooks
draft or write tests
draft or write Plans of Instruction (POI)

IV. CREW ACTIVITIES CLUSTER (GRP35, N=201). The Crew Activities cluster comprised 27 percent of the survey sample. The following tasks typify the kinds of things crewmembers do:

make entries in event log
read information files, such as read, hot, or crew information files
read message traffic

brief incoming positional counterparts during changeover
report equipment outages

Incumbents, on the average, spent 37 percent of their time performing crew activities and 16 percent of their time doing administrative, management, and command duties. One hundred and twenty is the average number of tasks performed by personnel in this cluster. Thirty-seven percent are captains, and 52 percent are lieutenants. Over 1/5 have a Master's degree, and 47 percent have DAFSC 2035. AFSPACECOM claims 1/2 of these officers, while USSPACECOM and AFSC make up 46 percent of the remainder. The average TAFMS is 7 years, the average TICF is 3 years, and the average time in the present job is 1 year. Overseas assignments account for 13 percent of the cluster. Job satisfaction is very good, with 71 percent finding their jobs interesting. Eighty percent of these officers indicated that a technical degree was not necessary to perform their job. Within this Crew Activities cluster, these five different groups were identified:

A. Chief of Operations
B. Missile Warning Center Commanders
C. Orbital Analysis Officers
D. Satellite Command and Control Officers

A. Chief of Operations (GRP163, N=80). A typical profile of these officers is a captain or lieutenant with DAFSC 203XA who is in AFSPACECOM or USSPACECOM and has been in his or her present job less than 2 years. Representative tasks performed by the group include:

read message traffic
report site OPSCAP
determine site OPSCAP
notify crewmembers of mission events
direct crewmembers to take console actions

There are five different groups of Chief of Operations people. A discussion of each follows:

1. Operations Training Chiefs and Crew Operations Directors (GRP382, N=12). Tasks that make these officers different from other chiefs of operations are those tasks related specifically to training. Example tasks are:

conduct recurring training
verify completion of training requirements
conduct initial qualification training
conduct corrective training
conduct additional training

2. Missile Warning Operations Commanders (GRP490, N=11). Tasks performed by incumbents in this job are listed below:

interpret information on status or display boards
determine site OPSCAP
report site OPSCAP
configure systems for use of simulation media
voicetell warning data to MWC

Another item unique to this group is that everyone in the job is assigned to either the 10th Missile Warning Squadron (MWS) or the 20th MWS.

3. Tactical Operations Commanders (GRP389, N=8). Personnel in the Tactical Operations job perform many of the same tasks as the missile warning group (GRP490). The difference between the two jobs, however, lies first, in the amount of time spent on similar tasks, and second, in the number of tasks performed. Officers in this job perform more tasks than the missile warning group, but they do not spend a lot of time on any one task. For these same tasks Missile Warning Officers spend quite a bit of time. A sample comparison of the two jobs is included in Table 3.

4. Surveillance Crew Commanders (GRP255, N=10). Different tasks performed by this group of surveillance personnel are listed below:

verify current element sets with NSSC personnel
coordinate with crewmembers on track data requirements
coordinate with crewmembers on acquisition of targets
report number of UCT to NSSC
correlate UCT with known satellites

This job differs from the others in two ways. First, the average number of tasks performed is low, only 77. This indicates the Surveillance Crew Commander job is more specialized than other jobs within the Chief of Operations group. Second, each of these personnel is assigned overseas at the 17th Surveillance Squadron (SURS).

5. Stan/Eval Chiefs (GRP290, N=6). The final set of officers in the Chief of Operations job is the Stan/Eval Chiefs. Example tasks performed by this group are:

draft or write checklists
schedule exercises, inspections, or evaluations
schedule no-notice evaluations
evaluate trainees
evaluate trainers or instructors

TABLE 3

COMPARISON OF AVERAGE PERCENT TIME SPENT, ON SIMILAR TASKS, BY MISSILE WARNING AND TACTICAL OPERATIONS COMMANDERS

TASKS	AVERAGE PERCENT TIME SPENT BY ALL MWOCC	AVERAGE PERCENT TIME SPENT BY ALL TACTICAL OPS COMMANDER
DETERMINE SITE OPSCAP	1.66	.66
MAKE ENTRIES IN EVENT LOGS	1.75	.59
DELIVER OR PICK UP MESSAGES FROM MESSAGE CENTERS	1.58	.64
READ MESSAGE TRAFFIC	1.54	.59

Another item that sets this group apart from the others is 67 percent of these officers have an M-prefix.

*m-prefix means an officer is a student, flight examiner, missile evaluation officer, space operations evaluation officer, air weapons control evaluation officer, or aerial reconnaissance weather evaluations officer.

B. Missile Warning Center Commanders (GRP331, N=7). The data reflects that officers in this job perform tasks related to attack assessment and threat analysis and notification. Some of these tasks include:

monitor missile warning system status
report less-than-release data
report attack assessment to CD
report attack characterization to CD
notify CD of targeted areas, launch location and time, and monitoring sensor site

On the average, group members perform 100 tasks. Most are second lieutenants with less than 2 years in the present job. These officers typically carry DAFSC 2035A or 2035C and work for USSPACECOM at Cheyenne Mountain.

C. Orbital Analysis Officers (GRP129, N=19). A profile of these Orbital Analysts indicates they range in rank from second lieutenant to captain, have less than 2 years experience in their job, work for USSPACECOM at Cheyenne Mountain, and have DAFSC 202X. Tasks frequently performed are:

maintain classified information
analyze bulletins on element sets
generate collision avoidance data
identify normal decay satellites

Two different groups of Orbital Analysts were identified in this report. They are Administrative Orbital Analysts and Orbital Analysts.

1. Administrative Orbital Analysts (GRP199, N=5). These tasks are representative of what an Administrative Orbital Analyst performs:

attend space-related conferences, meetings, or working groups
conduct formal briefings
read technical publications, such as magazines, reports, or bulletins

conduct visitor or VIP briefings
draft or write memoranda for record

The average number of tasks performed by group members is 81.

2. Orbital Analysts (GRP388, N=8). Tasks that depict the job performed by members of this job are:

advise commander on orbital mechanics questions or problems
interpret element quality outputs
identify objects to be monitored
compare observational data with predicted ephemeris
analyze computation of miss between orbits (COMBO) outputs

On the average, group members perform 133 tasks.

D. Satellite Command and Control Officers (GRP48, N=55). The 55 respondents in this group are typified by the following: a captain or lieutenant with DAFSC 203X or 205X; assigned to AFSC or AFSPACECOM; and have occupied their present job less than 2 years. Twenty percent of the group have a B-shred (Space Systems Control). On the average, group members perform 72 tasks. Example tasks are included below:

analyze telemetry data to determine state of health or mission capability of satellite or spacecraft
perform on-orbit console operations
coordinate with mission controller on specific operational requirements or plan of support
make entries in events logs
evaluate satellite run or mission performance

Within this group of Satellite Command and Control Officers there are 4 distinctly different subgroups:

1. Mission Controllers
2. Planner Analysts
3. Satellite Operations Officers
4. Mission Planners

1. Mission Controllers (GRP342, N=7). This Mission Controller group consists of seven officers that are all working at Onizuka AFSCF. Example tasks performed by this group include:

monitor control consoles to determine position of satellites
monitor up-link capability
direct computer or ground data link communications equipment configurations
transmit satellite commands

2. Planner Analysts (GRP158, N=10). These tasks are performed by Planner Analysts and set this group apart from others:

design daily run plan packages
update status displays or boards
interpret information on status or display boards
analyze real time anomolies

Unlike other groups, these officers have DAFSC 2055 and work at Onizuka AFSCF.

3. Satellite Operations Officers (GRP409, N=8). Satellite Operations Officers and Mission Planners (GRP271 which follows) are similar in that both have DAFSC 203XB and work at the 1000th Satellite Operations Group (SOG), but the list below shows that actual tasks performed by this job differ from the tasks performed by Mission Planners.

identify equipment malfunctions
announce data on or off conditions
coordinate with command and control center (CCC) or CRS personnel on upcoming satellite pass activities
verify data on-off conditions

4. Mission Planners (GRP271, N=6). These six respondents differ from Mission Controllers and Planner Analysts, but, as mentioned earlier, are similar to Satellite Operations Officers. Both carry DAFSC 203XB and are assigned to the 1000th SOG. Tasks that set Mission Planners apart from all three previous jobs are:

review variable requirements list (VRL) edit printouts or master listing
compile inputs for weekly master listing computer runs
compile data for mission planning computer input
build satellite commands

Summary

The one underlying factor that stands out in this job analysis is the large amount of time spent by 20XX personnel in the administration, management, and command area. Regardless of the job, rank, MAJCOM, or time in the career field, the most frequently performed tasks were those in the administration, management, and command duties. The two independent jobs identified were expected because Trainers and Manned Space Flight Officers have unique jobs. Job attitude indicators were compared to a representative sample of USAF officers, and the results of this comparison are summarized in Table 4. Generally, 20XX personnel have favorable impressions of their jobs. Job interest is fairly high. Utilization of talents is high, and most officers feel a sense of accomplishment from their job. Table 5 is a summary of attitude data for each of the structure analysis jobs.

MAJCOM ANALYSIS

Another means of comparison within a particular field is through MAJCOM analysis. The major command to which an officer is assigned may have some impact on the type of job he or she performs; therefore, an examination of duties and tasks performed by incumbents in each MAJCOM is necessary.

Results found were both obvious and predictable and are shown in Table 6, which contains the relative percent time spent by MAJCOM groups for each of the duties. Tables 7-9 indicate those tasks which differentiate AFSPACECOM, USSPACECOM, and AFSC personnel from each other. To summarize these differences: many more AFSPACECOM and USSPACECOM officers perform crew activities than AFSC officers. More AFSC personnel perform contract management than USSPACECOM personnel, and USSPACECOM is involved with more attack warning or attack assessment and threat analysis than AFSPACECOM.

ANALYSIS OF 20XX PAYGRADE GROUPS

An analysis of the various AFS 20XX paygrade groups (second lieutenant through colonel) provides information regarding the types of jobs officers typically perform at different stages in their careers. The colonels and lieutenant colonels' jobs are well defined, dealing primarily with administration, management, and command. The lieutenants' jobs are less defined, although a significant amount of time is spent performing administration and crew activities functions. Majors and captains perform administration, management, and command tasks, similar to the other paygrade groups, and they are also involved in systems development, integration, and acquisition. A summary of percent time spent in duties across paygrade groups is provided in Table 10.

TABLE 4

COMPARISON OF JOB ATTITUDE INDICATORS FOR
20XX OFFICERS AND A REPRESENTATIVE SAMPLE OF USAF OFFICERS

	TOTAL SAMPLE 20XX OFFICERS (N=756)	REPRESENTATIVE SAMPLE USAF OFFICERS (N=10,177)
EXPRESSED JOB INTEREST		
INTERESTING	73	88
SO-SO	12	6
DULL	13	6
PERCEIVED UTILIZATION OF TALENTS		
FAIRLY WELL TO PERFECTLY	73	89
LITTLE OR NOT AT ALL	26	11
SENSE OF ACCOMPLISHMENT		
SATISFIED	67	82
AMBIVILENT	8	4
DISSATISFIED	24	14

TABLE 5

COMPARISON OF JOB ATTITUDE INDICATORS BY STRUCTURE ANALYSIS GROUPS

	STAFF OFFICER CLUSTER (GRP54, N=366)	CREW ACTIVITIES CLUSTER (GRP35, N=201)	MANNED SPACE FLIGHT OFFICERS (GRP157, N=12)	TRAINERS (GRP37, N=44)
EXPRESSED JOB INTEREST				
INTERESTING	83	71	100	64
SO-SO	10	11	0	27
DULL	6	16	0	7
JOB UTILIZES TALENTS				
FAIRLY WELL TO PERFECTLY	83	63	100	82
LITTLE OR NOT AT ALL	16	36	0	18
SENSE OF ACCOMPLISHMENT				
SATISFIED	76	64	100	71
AMBIVALENT	4	10	0	14
DISSATISFIED	19	24	0	16

TABLE 6

COMPARISON OF MAJOR COMMAND GROUPS
RELATIVE PERCENT TIME SPENT ON DUTIES

TASKS	PERCENT TIME SPENT BY MAJOR COMMAND GROUPS				
	AFSPACECOM (N=314)	AFSC (N=241)	USSPACECOM (N=97)	ATC (N=38)	ALL OTHERS (N=49)
A. ADMINISTRATION, MANAGEMENT, AND COMMAND	36	40	36	31	46
B. PERSONNEL AND MANPOWER	7	7	5	5	7
C. TRAINING	3	8	6	35	4
D. INSPECTION AND EVALUATION	7	3	4	3	3
E. ORBITAL ANALYSIS	2	3	9	-	2
F. SYSTEMS DEVELOPMENT, INTEGRATION, AND ACQUISITION	8	11	5	7	17
G. SOFTWARE DEVELOPMENT AND ANALYSIS	2	2	-	-	1
H. HARDWARE-SOFTWARE CONFIGURATION MANAGEMENT	2	2	-	2	1
I. INTELLIGENCE AND SPACE OBJECT IDENTIFICATION (SOI)	-	-	-	3	-
J. SPACE TRACKING AND OPTICAL TRACKING	-	-	2	-	-
K. MANNED SPACE FLIGHT	2	2	-	2	-
L. CREW ACTIVITIES	18	9	22	3	13
M. CONTRACT MANAGEMENT AND MONITORING	3	6	-	2	2
N. SATELLITE COMMAND AND CONTROL	3	6	-	1	1
O. ATTACK WARNING/ATTACK ASSESSMENT AND THREAT ANALYSIS	2	-	7	2	2

- Less than 1 percent

TABLE 7

TASKS WHICH DIFFERENTIATE AFSC OFFICERS FROM AFSPACECOM OFFICERS

TASKS		PERCENT PERFORMING AFSC	AFSPACECOM
L717	PRACTICE OR PERFORM ALERT CONDITION (LERTCON) CHANGES	1	31
L720	PRACTICE OR PERFORM MINIMIZE PROCEDURES	3	33
L721	PRACTICE OR PERFORM PERSONNEL RECALL PROCEDURES	12	42
L680	ENCRYPT OR DECRYPT MESSAGES	1	27
L734	REPORT SITE OPSCAP	0	26
L731	REPORT EQUIPMENT OUTAGES	10	34
L736	REPORT SITE OR SYSTEM DEGRADATIONS	2	25
L625	AUTHENTICATE VOICE MESSAGES USING AUTHENTICATION TABLES	1	23
L670	DIRECT CREWMEMBERS TO TAKE CONSOLE ACTIONS	3	25
L707	NOTIFY CREWMEMBERS OF MISSION EVENTS	4	26
L737	REQUEST PERMISSION FOR DOWNTIME	2	22
D262	DEVELOP SCENARIOS	8	27
L626	BRIEF INCOMING CREWS DURING CHANGEOVER	8	27
L627	BRIEF INCOMING POSITIONAL COUNTERPARTS DURING CHANGEOVER	8	27
L693	INVENTORY CLASSIFIED MATERIALS	5	24
L724	PRACTICE OR PERFORM SENSOR RECALL PROCEDURES	0	18
L706	NOTIFY CREWMEMBERS OF MISSION ALERT, SUCH AS PERIOD OF INTEREST OR ANCHOR ALERT	0	18
L740	REVIEW INFORMATION ENTERED IN EVENTS LOG	10	28
L735	REPORT SITE OR SENSOR ENVIRONMENT STATUS	1	18
L698	MAKE ENTRIES IN EVENTS LOG	14	31

TABLE 8

TASKS WHICH DIFFERENTIATE AFSC OFFICERS FROM USSPACECOM OFFICERS

TASKS		PERCENT PERFORMING AFSC	PERCENT PERFORMING USSPACECOM
M778	REVIEW CONTRACTOR'S STATUS REPORTS	23	3
M779	REVIEW CONTRACTOR'S TEST PLANS OR REPORTS	22	2
M776	EVALUATE CONTRACTOR'S PERFORMANCE AGAINST SOW	20	4
M768	EVALUATE CONTRACTOR'S PERFORMANCE, OTHER THAN THROUGH USE OF CHECKLIST	18	3
N833	REVIEW PLAN OF SUPPORT OR COMMAND PLANS	15	2
N840	VERIFY ACCURACY OF SATELLITE COMMANDS	14	1
M762	COORDINATE WITH CONTRACTORS TO RESOLVE SYSTEMS OR EQUIPMENT MALFUNCTIONS	15	3
F464	TRANSITION TO OPERATIONAL STATUS	15	4
M769	EXCHANGE TECHNICAL DATA WITH CONTRACTORS	25	13
M776	REVIEW CONTRACTOR'S BIDS OR PROPOSALS	15	4
L726	READ MESSAGE TRAFFIC	12	56
L627	BRIEF INCOMING POSITIONAL COUNTERPARTS DURING CHANGEOVER	8	48
L626	BRIEF INCOMING CREWS DURING CHANGEOVER	8	42
L731	REPORT EQUIPMENT OUTAGES	10	43
L707	NOTIFY CREWMEMBERS OF MISSION EVENTS	4	36
L698	MAKE ENTRIES IN EVENTS LOG	14	41
L679	ENCODE OR DECODE MESSAGES	1	28
L720	PRACTICE OR PERFORM MINIMIZE PROCEDURES	3	26
E289	ADVISE COMMANDER ON ORBITAL MECHANICS QUESTIONS OR PROBLEMS	5	28
E333	IDENTIFY TRACKING AND IMPACT PREDICTION (TIP) OBJECTS	1	23

TABLE 9

TASKS WHICH DIFFERENTIATE AFSPACECOM OFFICERS FROM USSPACECOM OFFICERS

TASKS		PERCENT PERFORMING AFSPACECOM	USSPACECOM
D283	REVIEW FORMAL INSPECTION REPORTS, SUCH AS IG, STAN EVAL, OR STAFF ASSISTANCE	27	3
L737	REQUEST PERMISSION FOR DOWNTIME	22	4
M779	REVIEW CONTRACTOR'S TEST PLANS OR REPORTS	18	2
D278	INSPECT PERSONNEL FOR COMPLIANCE WITH AFR 35-10	33	18
D262	DEVELOP SCENARIOS	27	13
D247	ATTEND INSPECTION OUTBRIEFINGS	24	10
M766	EVALUATE CONTRACTOR'S PERFORMANCE AGAINST SOW	18	4
F457	REVIEW SOW	23	9
L741	REVIEW OR RELEASE MISSION-RELATED REPORTS	20	7
0919	REPORT SITE SYSTEM REPORT TO MWC	13	1
L635	CHANGE SLIDES ON CLOSED CIRCUIT TELEVISION (TV) VISUAL DISPLAYS	1	29
L627	BRIEF INCOMING POSITIONAL COUNTERPARTS DURING CHANGEOVER	27	45
0906	REPORT ATTACK ASSESSMENT TO CD	2	21
0901	REVIEW DATA FROM SENSOR SITES	4	23
E313	CORRELATE REENTRY DATA WITH LAUNCH INFORMATION	3	22
E291	ANALYZE COMPUTATION OF MISS BETWEEN ORBITS (COMBO) OUTPUTS	3	22
0866	CORRELATE REENTRY DATA WITH KNOWN TIP OBJECTS	1	20
E333	IDENTIFY TRUCKING AND IMPACT PREDICTION (TIP) OBJECTS	4	23
E317	DETERMINE TASKING CHANGES	4	22
E348	REVIEW PASCHED PRINTOUTS	4	21

TABLE 10

COMPARISON OF PAYGRADE GROUPS

RELATIVE PERCENT OF TIME SPENT ON DUTIES

DUTY	PERCENT TIME SPENT					
	2LT (N=137)	1LT (N=137)	CAPT (N=295)	MAJ (N=115)	LTC (N=61)	COL (N=11)
A. ADMINISTRATION, MANAGEMENT, AND COMMAND	35	28	37	47	53	58
B. PERSONNEL AND MANPOWER	3	2	6	11	16	22
C. TRAINING	9	12	10	4	5	-
D. INSPECTION AND EVALUATION	2	5	5	5	3	5
E. ORBITAL ANALYSIS	5	5	3	-	-	-
F. SYSTEMS DEVELOPMENT, INTEGRATION, AND ACQUISITION	7	8	10	13	9	8
G. SOFTWARE DEVELOPMENT AND ANALYSIS	3	2	2	-	-	-
H. HARDWARE-SOFTWARE CONFIGURATION MANAGEMENT	3	2	2	1	1	-
I. INTELLIGENCE AND SPACE OBJECT IDENTIFICATION (SOI)	-	-	-	-	-	-
J. SPACE TRACKING AND OPTICAL TRACKING	-	2	-	-	-	-
K. MANNED SPACE FLIGHT	1	2	2	-	1	-
L. CREW ACTIVITIES	20	20	13	9	5	2
M. CONTRACT MANAGEMENT AND MONITORING	3	3	4	4	3	2
N. SATELLITE COMMAND AND CONTROL	5	7	3	1	-	-
O. ATTACK WARNING/ATTACK ASSESSMENT AND THREAT ANALYSIS AND NOTIFICATION	3	3	2	2	2	-

- Less than 1 percent

ANALYSIS OF TIME IN CAREER FIELD (TICF) GROUPS

An analysis of time in career field (TICF) groups identifies the types of jobs officers typically perform as their experience within a utilization field increases. This section will focus on differences in percent time spent within duties in terms of time in career field.

Normally, as time in career field increases there is also an increase in time spent on administration, management, and command functions and a decrease in time spent in technical areas. For 20XX officers, these expectations held true. Personnel with greater than 8 years experience spend, on the average, 50 percent of their time performing administration, management, and command tasks, while incumbents with less than 2 years experience spend 35 percent of their time performing these duties. However, in the more technical area of crew activities the trend is reversed. Personnel with less than 2 years TICF experience spend 19 percent of their time performing crew duties, and members with over 8 years TICF spend only 6 percent of their time here.

Finally, a notable characteristic for the 20XX utilization field is the large percentage of time spent in the area of administration, management, and command; this has been a common denominator throughout this study.

DAFSC ANALYSIS

In addition to the identification and discussion of the 20XX job structure, an analysis of DAFSC groups is an important part of each OSR. This information is used to evaluate how accurately AFR 36-1 Specialty Descriptions reflect what utilization field personnel are doing in the field.

DAFSC 2011/2016. The 191 officers in this group spend 48 percent of their time performing administration, management, and command tasks. Two other areas that account for more than 10 percent of this groups time spent were personnel and manpower and systems development, integration, and acquisition. Forty-five tasks are performed by more than 50 percent of these officers. The top 20 tasks are listed in Table 11, along with percent members performing data. An examination of tasks performed by entry-level and fully-qualified personnel indicated that DAFSC 2016 officers do more "approving or disapproving" and "drafting or writing", but, regardless of skill level, the job performed is basically the same.

DAFSC 2021/2025. Seventy-nine officers make up this group of Space Operations Analysts. Thirty-three percent of the time spent by these officers is on administration, management, and command tasks. Sixteen percent of their time is spent performing orbital analysis tasks, and 12 percent of their time is spent on crew activities tasks. Tasks performed by greater than 40 percent of these officers are listed in Table 12. Entry-level personnel perform more orbital analysis and crew activities functions, while fully qualified officers

TABLE 11

TOP 20 TASKS PERFORMED BY DAFSC 2011/2016 PERSONNEL

TASKS	PERCENT PERFORMING (N=191)
CONDUCT INFORMAL BRIEFINGS	90
DRAFT OR WRITE MEMORANDA FOR THE RECORD	86
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	82
ATTEND COMMANDER'S CALL	82
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	82
CONDUCT FORMAL BRIEFINGS	82
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	80
DRAFT OR WRITE RESPONSES TO ACTION ITEM	73
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	73
DRAFT OR WRITE NOMINATIONS FOR AWARDS OR DECORATIONS	71
DRAFT OR WRITE OFFICER EFFECTIVENESS REPORTS (OER)	71
CONDUCT VISITOR OR VIP BRIEFINGS	70
APPROVE OR DISAPPROVE LEAVE REQUESTS	68
DRAFT OR WRITE TRIP REPORTS	65
REVIEW CHANGES TO DIRECTIVES, SUCH AS OI OR REGULATIONS	63
DRAFT OR WRITE NONOPERATIONAL MESSAGES FOR ELECTRICAL TRANSMISSION	61
ASSIGN SUSPENSE DATES TO ACTION ITEMS	60
COUNSEL PERSONNEL ON JOB PERFORMANCE, PERSONAL, OR MILITARY-RELATED PROBLEMS	60
CONDUCT SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	59
DRAFT OR WRITE LETTERS OF APPRECIATION OR REPRIMAND	59

TABLE 12

TASKS PERFORMED BY GREATER THAN 40 PERCENT OF DAFSC 2021/2025 PERSONNEL

TASKS	PERCENT PERFORMING (N=79)
ATTEND COMMANDER'S CALL	81
CONDUCT INFORMAL BRIEFINGS	63
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	62
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	61
MAINTAIN CLASSIFIED INFORMATION	54
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	49
CONDUCT FORMAL BRIEFINGS	44
DRAFT OR WRITE MEMORANDA FOR THE RECORD	43
CONDUCT VISITOR OR VIP BRIEFINGS	42
ESCORT VISITORS OR VIP IN LIMITED ACCESS AREAS	42
SECURE CLASSIFIED DOCUMENTS OR EQUIPMENT	41

do more supervisory type tasks. More specifically, officers in DAFSC 2025 (Space Operations Analysts) do more "drafting or writing" and "conducting" tasks than DAFSC 2021 officers.

DAFSC 2031. These 57 entry-level personnel spend 32 percent of their time doing administration, management, and command tasks and 25 percent of their time performing tasks in the crew activities area. Thirteen tasks are performed by over 40 percent of the group members; these tasks are listed in Table 13, along with percent members performing for each task.

DAFSC 2035A. Similar to officers in DAFSC 2031, officers in this group spend an average of 31 percent of their time on administration, management, and command and 25 percent of their time on crew activities. However, unlike previous DAFSC groups, incumbents in DAFSC 2035A spend an average of 12 percent of their time performing training tasks. The top training tasks performed by group members include:

develop scenarios
maintain self-inspection books or checklists
inspect personnel for compliance with AFR 35-10
critique crew members performance on exercises or evaluations
conduct unit self-inspections

The top 20 tasks for these 110 officers, based on percent members performing, are listed in Table 14.

DAFSC 2035B. Four areas comprised 74 percent of the time spent by these officers. Two of these areas were administration and training, and two were more technical in nature. The following chart lists the four duties and the average time spent on each.

Duty	Percent Time Spent
Administration, management and command	29
Crew activities	16
Training	15
Satellite command and control	13

Table 15 lists those tasks performed by more than 40 percent of DAFSC 2035B officers.

DAFSC 2035C. The 23 members in this group spend an average of 70 percent of their time in the following areas: (1) administration, management, and command; (2) crew activities; and (3) systems development, integration, and acquisition. Again, administration, management, and command required the most time spent, with officers spending an average of 36 percent of their time in this area. On the technical side, crew activities tasks required an average

TABLE 13

TASKS PERFORMED BY GREATER THAN 40 PERCENT OF DAFSC 2031 PERSONNEL

TASKS	PERCENT PERFORMING (N=57)
ATTEND COMMANDER'S CALL	91
CONDUCT INFORMAL BRIEFINGS	60
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	56
DESTROY OR WITNESS THE DESTRUCTION OF CLASSIFIED DOCUMENTS	54
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	53
ESCORT VISITORS OR VIP IN LIMITED ACCESS AREAS	49
MAINTAIN CLASSIFIED INFORMATION	44
PRACTICE OR PERFORM PROCEDURES FOR EQUIPMENT FAILURES, SUCH AS CONSOLES, COMMUNICATIONS, OR COMPUTER	44
REPORT EQUIPMENT OUTAGES	42
SECURE CLASSIFIED DOCUMENTS OR EQUIPMENT	40
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	40
READ INFORMATION FILES, SUCH AS READ, HOT, OR CREW INFORMATION FILES	40
READ MESSAGE TRAFFIC	40

TABLE 14

TOP 20 TASKS PERFORMED BY DAFSC 2035A PERSONNEL

TASKS	PERCENT PERFORMING (N=110)
ATTEND COMMANDER'S CALL	87
CONDUCT INFORMAL BRIEFINGS	75
CONDUCT FORMAL BRIEFINGS	66
MAINTAIN CLASSIFIED INFORMATION	65
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	65
SECURE CLASSIFIED DOCUMENTS OR EQUIPMENT	63
DRAFT OR WRITE MEMORANDA FOR THE RECORD	62
DESTROY OR WITNESS THE DESTRUCTION OF CLASSIFIED DOCUMENTS	62
CONDUCT VISITOR OR VIP BRIEFINGS	58
ESCORT VISITORS OR VIP IN LIMITED ACCESS AREAS	56
DRAFT OR WRITE RESPONSES TO ACTION ITEM	55
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	54
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	52
READ MESSAGE TRAFFIC	52
READ INFORMATION FILES, SUCH AS READ, HOT, OR CREW INFORMATION FILES	52
PRACTICE OR PERFORM PERSONNEL RECALL PROCEDURES	50
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	48
REPORT EQUIPMENT OUTAGES	48
PRACTICE OR PERFORM EMERGENCY SECURITY PROCEDURES, SUCH AS BOMB THREAT OR HELPING HAND	48
DRAFT OR WRITE AIRMAN PERFORMANCE REPORTS (APR)	48

TABLE 15

TASKS PERFORMED BY GREATER THAN 40 PERCENT OF DAFSC 2035B PERSONNEL

TASKS	PERCENT PERFORMING (N=53)
ATTEND COMMANDER'S CALL	89
CONDUCT INFORMAL BRIEFINGS	70
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	68
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	62
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	62
CONDUCT VISITOR OR VIP BRIEFINGS	58
DRAFT OR WRITE MEMORANDA FOR THE RECORD	55
CONDUCT FORMAL BRIEFINGS	53
DESTROY OR WITNESS THE DESTRUCTION OF CLASSIFIED DOCUMENTS	53
DRAFT OR WRITE RESPONSES TO ACTION ITEM	51
REVIEW REGULATIONS OR MANUALS	51
ESCORT VISITORS OR VIP IN LIMITED ACCESS AREAS	51
SECURE CLASSIFIED DOCUMENTS OR EQUIPMENT	49
DRAFT OR WRITE TRIP REPORTS	47
SPONSOR NEWLY ASSIGNED PERSONNEL	45
DRAFT OR WRITE DIRECTIVES, SUCH AS OI OR REGULATIONS	43
READ INFORMATION FILES, SUCH AS READ, HOT, OR CREW INFORMATION FILES	43
DRAFT OR WRITE RESPONSES TO DISCREPANCIES IDENTIFIED IN REPORTS, SUCH AS IG, STAN EVAL, OR STAFF ASSISTANCE	43
PRACTICE OR PERFORM PERSONNEL RECALL PROCEDURES	43
MAINTAIN CLASSIFIED INFORMATION	42
DRAFT OR WRITE CHANGES TO REGULATIONS OR MANUALS	42
REVIEW SUPPLEMENTS TO REGULATIONS OR MANUALS	42
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	40
VERIFY SECURITY CLEARANCES OF VISITORS	40
DRAFT OR WRITE NOMINATIONS FOR AWARDS OR DECORATIONS	40

of 25 percent of the time spent by DAFSC 2035C officers, and systems development, integration, and acquisition required an average of 10 percent time spent. In the following table (Table 16), the top 20 tasks performed by personnel in this group are listed.

DAFSC 2035D. Only two DAFSC 2035D officers responded to the occupational survey; therefore, an analysis of this group will not be done.

DAFSC 2041/2045. Sixty-six Manned Space Flight Operations Officers make up this group. Administration, management, and command tasks require an average of 38 percent of the time spent by these incumbents, and an average of 13 percent of their time is spent performing training tasks. Directly related to their DAFSC title, these officers spend 11 percent of their time performing manned space flight tasks. Table 17 lists the 12 tasks with greater than 40 percent members performing. An analysis of tasks performed by entry-level and fully-qualified personnel indicated only two main differences between levels. First, the 5 entry-level officers in this group do the more administrative tasks related to regulations. Example tasks include:

review changes to regulations or manuals
review regulations or manuals
review changes to directives such as OI or regulations
draft or write changes to regulations or manuals
draft or write supplements to regulations or manuals
review supplements to regulations or manuals

Second, fully qualified officers are more involved in training. Typical tasks which make DAFSC 2045 personnel differ from DAFSC 2041 personnel are listed below.

conduct OJT
conduct formal training programs
evaluate trainees
conduct additional training
draft or write changes to technical training courses
counsel trainees on training progress

DAFSC 2051/2055. Satellite Operations Officers are possibly the most diverse of all DAFSC groups. Although 72 percent of their average time spent is in the four areas listed below, only seven tasks were performed by greater than 40 percent of the 134 officers in the group. These seven tasks are listed in Table 18.

TABLE 16

TOP 20 TASKS PERFORMED BY DAFSC 2035C PERSONNEL

TASKS	PERCENT PERFORMING (N=23)
CONDUCT INFORMAL BRIEFINGS	78
ESCORT VISITORS OR VIP IN LIMITED ACCESS AREAS	78
ATTEND COMMANDER'S CALL	78
DESTROY OR WITNESS THE DESTRUCTION OF CLASSIFIED DOCUMENTS	74
MAINTAIN CLASSIFIED INFORMATION	70
VERIFY SECURITY CLEARANCES OF VISITORS	70
CONDUCT VISITOR OR VIP BRIEFINGS	70
SECURE CLASSIFIED DOCUMENTS OR EQUIPMENT	65
READ MESSAGE TRAFFIC	65
CONDUCT FORMAL BRIEFINGS	65
READ INFORMATION FILES, SUCH AS READ, HOT, OR CREW INFORMATION FILES	61
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	61
DRAFT OR WRITE MEMORANDA FOR THE RECORD	57
MARK, DOWNGRADE, OR PAGE CHECK CLASSIFIED DOCUMENTS OR MATERIALS	57
ANSWER INQUIRIES TO SECURITY CLEARANCE BACKGROUND INVESTIGATIONS	57
REPORT SECURITY VIOLATIONS OR COMPROMISES	52
DRAFT OR WRITE RESPONSES TO ACTION ITEM	48
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	48
DELIVER OR PICK UP MESSAGES FROM MESSAGE CENTERS	48
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	48

TABLE 17

TASKS PERFORMED BY GREATER THAN 40 PERCENT OF DAFSC 2041/2045 PERSONNEL

TASKS	PERCENT PERFORMING (N=66)
ATTEND COMMANDER'S CALL	91
CONDUCT INFORMAL BRIEFINGS	79
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	77
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	77
DRAFT OR WRITE WEEKLY OR MONTHLY ACTIVITIES OR PROGRESS REPORTS	70
CONDUCT FORMAL BRIEFINGS	68
DRAFT OR WRITE RESPONSES TO ACTION ITEM	65
DRAFT OR WRITE MEMORANDA FOR THE RECORD	53
CONDUCT VISITOR OR VIP BRIEFINGS	52
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	44
DRAFT OR WRITE TRIP REPORTS	44
DRAFT OR WRITE OFFICER EFFECTIVENESS REPORTS (OER)	41

TABLE 18

TASKS PERFORMED BY GREATER THAN 40 PERCENT OF DAFSC 2051/2055 PERSONNEL

TASKS	PERCENT PERFORMING (N=134)
ATTEND COMMANDERS'S CALL	93
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	68
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	60
CONDUCT INFORMAL BRIEFINGS	55
DRAFT OR WRITE MEMORANDA FOR THE RECORD	45
DRAFT OR WRITE WEEKLY OR MONTHLY ACTIVITIES OR PROGRESS REPORTS	43
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	40

Duty	Average Percent Time Spent
Administration, management and command	37
Training	13
Crew Activities	12
Systems development, integration and acquisition	10

Fully-qualified personnel perform the same tasks as entry-level personnel and spend similar amounts of time performing these tasks. Additionally, DAFSC 2055 officers are more involved in satellite command and control and crew activities. Example tasks which make DAFSC 2055 incumbents different from entry-level officers are listed below.

implement contingency plans for major satellite anomalies
analyze telemetry data to determine state of health or mission capability of satellite or spacecraft
coordinate with mission controller during pass support to receive directions or verify results of action
determine satellite commanding requirements
perform actions to resolve real anomalies

DAFSC 2091/2096. Typically, Space Operations Directors spend most of their time performing administration, management, command, and personnel tasks. Accordingly, survey respondents holding DAFSC 209X indicated their average percent time spent on administration, management, and command tasks was 52 percent, while their average time spent on personnel and manpower tasks was 20 percent. The tasks performed by the most incumbents are listed in Table 19.

CONUS/OVERSEAS ANALYSIS

Analysis of CONUS/overseas jobs enables one to determine if the job performed overseas differs from the job performed in the CONUS. For the Space Operations utilization field, differences do exist. More officers overseas are performing crew activities, and they are spending more time performing crew activities. On the other hand, more officers located in the CONUS do systems development, integration, and acquisition, and more time is spent by CONUS personnel performing these tasks. Table 20 lists those tasks which make CONUS and overseas jobs different.

TABLE 19

TOP TASKS PERFORMED BY DAFSC 2091/2096 PERSONNEL

TASKS	PERCENT PERFORMING (N=22)
CONDUCT INFORMAL BRIEFINGS	100
CONDUCT VISITOR OR VIP BRIEFINGS	100
DRAFT OR WRITE MEMORANDA FOR THE RECORD	100
CONDUCT FORMAL BRIEFINGS	100
DRAFT OR WRITE LETTERS OF APPRECIATION OR REPRIMAND	95
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	91
ADVISE COMMANDERS OR STAFF AGENCY PERSONNEL ON MATTERS, SUCH AS CAPABILITIES, PROCEDURES, OR PROGRAMS	91
COUNSEL PERSONNEL ON CAREER PROGRESSION	91
ASSIGN SUSPENSE DATES TO ACTION ITEMS	91
APPROVE OR DISAPPROVE RESPONSES TO ACTION ITEMS	86
INTERPRET POLICIES OR DIRECTIVES FOR SUBORDINATES	86
REVIEW OER	86
COUNSEL PERSONNEL ON JOB PERFORMANCE, PERSONAL, OR MILITARY-RELATED PROBLEMS	86
REVIEW CHANGES TO REGULATIONS OR MANUALS	86
DRAFT OR WRITE NONOPERATIONAL MESSAGES FOR ELECTRICAL TRANSMISSION	86
DRAFT OR WRITE NOMINATIONS FOR AWARDS OR DECORATIONS	86
APPROVE OR DISAPPROVE NONOPERATIONAL MESSAGES FOR ELECTRICAL TRANSMISSION	86
APPROVE OR DISAPPROVE LEAVE REQUESTS	86
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	82
DRAFT OR WRITE OFFICER EFFECTIVENESS REPORTS (OER)	82
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	82
APPROVE OR DISAPPROVE TDY REQUESTS	82
REVIEW CHANGES TO DIRECTIVES, SUCH AS OI OR REGULATIONS	82
COORDINATE WITH PERSONNEL FOR TDY PREPARATION	82
APPROVE OR DISAPPROVE POINT, POSITION, OR TALKING PAPERS	82
ESTABLISH LEAVE POLICIES	82
APPROVE OR DISAPPROVE LETTERS OF APPRECIATION OR REPRIMAND	82

TABLE 20

TASKS WHICH DIFFERENTIATE CONUS/OVERSEAS PERSONNEL BY PERCENT PERFORMING

TASKS	PERCENT PERFORMING	
	CONUS (N=703)	OVERSEAS (N=45)
ATTEND SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	70	38
READ TECHNICAL PUBLICATIONS, SUCH AS MAGAZINES, REPORTS, OR BULLETINS	66	42
CONDUCT SPACE SYSTEMS-RELATED CONFERENCES, MEETINGS, OR WORKING GROUPS	37	18
DRAFT OR WRITE STAFF STUDIES OR STAFF SUMMARIES	32	18
REVIEW SOC	16	2
REVIEW PMD OR PMP	16	2
DRAFT OR WRITE TRIP REPORTS	44	31
EXCHANGE TECHNICAL DATA WITH CONTRACTORS	26	13
DRAFT OR WRITE POINT, POSITION, OR TALKING PAPERS	53	42
ENCODE OR DECODE MESSAGES	12	53
ENCRYPT OR DECRYPT MESSAGES	12	53
DETERMINE SITE OPSCAP	10	51
PRACTICE OR PERFORM BATTLE STAFF SUPPORT CENTER ACTIVATION PROCEDURES	11	53
REPORT SITE OR SYSTEM DEGRADATIONS	11	53
COORDINATE WITH CREWMEMBERS ON ACQUISITION OF TARGETS	6	49
READ INFORMATION FILES, SUCH AS READ, HOT, OR CREW INFORMATION FILES	28	71
PRACTICE OR PERFORM ALERT CONDITION (LERTCON) CHANGES	13	58
REPORT NUMBER OF UCT TO NSSC	2	47
COORDINATE WITH CREWMEMBERS ON TRACK DATA REQUIREMENTS	6	51
PRACTICE OR PERFORM PROCEDURES FOR POWER FAILURES	14	60
COORDINATE WITH MAINTENANCE PERSONNEL OR SYSTEMS CONTROLLERS ON CORRECTIVE MAINTENANCE (CM)	10	56
READ MESSAGE TRAFFIC	29	76
COORDINATE WITH MAINTENANCE OR OPERATIONS PERSONNEL ON SCHEDULE FOR PM	10	58
REPORT SITE OPSCAP	10	58
REQUEST PERMISSION FOR DOWNTIME	7	60

COMPARISON OF SURVEY DATA TO AFR 36-1 SPECIALTY DESCRIPTION

Occupational survey data were compared to the April 1987 AFR 36-1 Specialty Descriptions. The AFR 36-1 was well supported by survey data; however, the specialty description provided broad technical task statements, while survey data indicated most personnel perform the following types of administrative tasks: attend, conduct, draft, or review. No trends were found in the survey data to suggest that changes are needed at this time. However, analysis of the survey data pertaining to color vision indicated no real differences in the types of tasks performed by those officers who said they needed color vision and those officers who said they did not. In response to the occupational survey question: "Do you need a technical degree to perform your job?", 253 respondents answered "yes", while 427 answered "no". A comparison of the tasks performed by personnel who need a technical degree with the tasks performed by personnel who do not need a technical degree showed no major differences. Only these three tasks were performed by significantly more officers who indicated a need for a technical degree.

exchange technical data with contractors
review contractors, bids or proposals
advise commander on orbital mechanics
questions or problems

Recommend further examination of the color vision requirement for all 20XX DAFSCs (except 209X) and the technical degree requirement for DAFSCs 204X and 205X.

TRAINING ANALYSIS

Occupational survey data are one of the many sources of information that can be used to validate or revise training courses. Factors provided in the data which can be used for training decisions are training emphasis, plan of instruction (POI) matches, and percent members performing. Additional training data will be supplied directly to the interested MAJCOM.

Training Emphasis (TE) - Training emphasis is a rating of tasks indicating where emphasis should be placed in structured training for personnel entering the field. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal OJT, or any other organized training method.

For the 20XX utilization field, 75 captains, majors, or lieutenant colonels were asked to complete TE booklets. A 10-point scale (from no training required to extremely heavy training required) was used in rating each task. Forty of the 75 booklets mailed to the TE raters were returned to USAFOMC and

provided usable data. Statistical analysis of the responses showed that interrater reliability was unacceptable. This means that although the raters may have agreed on some areas which require training, there was insufficient agreement to allow for valid conclusions to be drawn from the data.

Plan of Instruction (POI) - To analyze the contents of POI G30BR2001 000, 8 October 1986, UST instructors at Lowry Technical Training Center attempted to match tasks in the job inventory (JI) to specific block references in the POI. However, the UST POI is presently knowledge-based, and a match of knowledge-based POI statements to performance tasks provided no substantially useful information. Further analysis by subject-matter experts may yield some useful guidelines for further UST revisions. A match of job inventory tasks to the 1013th Combat Crew Training Squadron (CCTS) POI, which has task performance statements, was accomplished and will be available to interested training personnel.

Percent Members Performing - Another source of information upon which to base training decisions is percent members performing data. Tables 21-23 list the technical tasks performed by DAFSC 202X, 203X and 204X officers. Technical tasks being those tasks which are not command, management, administrative, personnel, inspection, evaluation, or training tasks.

Table 21 contains the 17 technical tasks performed by at least 20 percent of DAFSC 202X officers. Listed in Table 22 are 18 tasks performed by at least 20 percent of DAFSC 203X personnel, and the 12 technical tasks performed by at least 20 percent of DAFSC 204X officers are listed in Table 23.

IMPLICATIONS

Personnel with less than 48 months TICF are the ones performing the bulk of the technical tasks, but greater than 33 percent of their time is spent doing administration, management, and command tasks.

Further review by USAFOMC and technically qualified personnel is necessary to provide a more complete examination of existing training programs.

The present requirements for color vision and specific technical degrees listed in AFR 36-1 need review. Incumbents indicate many jobs do not require these prerequisites. The imposition of these prerequisites may unnecessarily prevent otherwise qualified personnel from entering the Space Officer Utilization Field. A comprehensive review of the required entry prerequisites is recommended.

TABLE 21

TECHNICAL TASKS PERFORMED BY 202X OFFICERS

TASKS	PERCENT (N=79)
E289 ADVISE COMMANDERS ON ORBITAL MECHANICS QUESTIONS OR PROBLEMS	37
F428 EXCHANGE TECHNICAL DATA WITH CONTRACTORS	30
E335 INSERT NEW ELEMENT SETS INTO COMPUTER	29
E290 ANALYZE BULLETINS ON ELEMENT SETS	28
E291 ANALYZE COMPUTATION OF MISS BETWEEN ORBITS (COMBO) OUTPUTS	27
E341 PERFORM SATELLITE MANEUVER PROCESSING	25
E299 COMPARE OBSERVATIONAL DATA WITH PREDICTED EPHEMERIS	24
E302 COMPILE LOOK ANGLE INFORMATION FOR 24-HOUR PASS SCHEDULE	23
E332 IDENTIFY NORMAL DECAY SATELLITES	23
E361 VERIFY QUALITY OF ORBITAL DATA BASES	23
E333 IDENTIFY TRACKING AND IMPACT PREDICTION (TIP) OBJECTS	23
E336 INTERPRET ELEMENT QUALITY OUTPUTS	22
E296 CATALOG SPACE OBJECTS	22
L743 SELECT COMPUTER PROGRAMS TO RUN	20
E326 GENERATE COLLISION AVOIDANCE DATA	20
E356 TRANSMIT LOOK ANGLES	20
E340 PERFORM SATELLITE DECAY VERIFICATION PROCEDURES	20
E348 REVIEW PASCHED PRINTOUTS	20

TABLE 22

TECHNICAL TASKS PERFORMED BY 203X OFFICERS

TASKS		PERCENT (N=262)
L722	PRACTICE OR PERFORM PROCEDURES FOR EQUIPMENT FAILURES, SUCH AS CONSOLES, COMMUNICATIONS, OR COMPUTER	38
L680	ENCRYPT OR DECRYPT MESSAGES	36
L723	PRACTICE OR PERFORM PROCEDURES FOR POWER FAILURES	36
L679	ENCODE OR DECODE MESSAGES	36
L720	PRACTICE OR PERFORM MINIMIZE PROCEDURES	36
L717	PRACTICE OR PERFORM ALERT CONDITION (LERTCON) CHANGES	35
L734	REPORT SITE OPSCAP	33
L670	DIRECT CREWMEMBERS TO TAKE CONSOLE ACTIONS	32
L663	DETERMINE SITE OPSCAP	31
L736	REPORT SITE OR SYSTEM DEGRADATIONS	30
L625	AUTHENTICATE VOICE MESSAGES USING AUTHENTICATION TABLES	30
L718	PRACTICE OR PERFORM BATTLE STAFF SUPPORT CENTER ACTIVATION PROCEDURES	26
L646	COORDINATE WITH CREWMEMBERS ON ECM OR RADIO FREQUENCY INTERFERENCE (RFI) ACTIVITIES	25
L669	DIRECT CREWMEMBERS TO MAN SPECIFIC CONSOLES OR CREW POSITIONS	22
L634	CHANGE DISPLAY INFORMATION OR CONSOLE	21
L645	COORDINATE WITH CREWMEMBERS ON ACQUISITION OF TARGETS	21
L735	REPORT SITE OR SENSOR ENVIRONMENT STATUS	21
L692	INTERPRET INFORMATION ON STATUS OR DISPLAY BOARDS	20

TABLE 23

TECHNCIAL TASKS PERFORMED BY 204X OFFICERS

TASKS		PERCENT (N=66)
F428	EXCHANGE TECHNICAL DATA WITH CONTRACTORS	35
K593	MONITOR AIR-TO-GROUND VOICE TRANSMISSION	30
K598	MONITOR SPACE SHUTTLE ATTITUDE	29
K591	GENERATE FLIGHT DATA	27
L713	PERFORM ON-ORBIT CONSOLE OPERATIONS	26
K577	CONDUCT ASTRONAUT SUPPORT	26
K585	COORDINATE FLIGHT PLANNING	21
G475	DEVELOP OR MODIFY SOFTWARE	21
G471	DESIGN COMPUTER PROGRAMS OR CHANGES	20
G479	DOCUMENT COMPUTER PROGRAMS OR CHANGES	20
L619	ANALYZE REAL TIME ANOMALIES	20
K575	ANALYZE RENDEZVOUS PHASES	20

END

Feb.

1988

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